

REPORT

to occupy the academic position:

"Professor"	
"Associate Professor"	x
	one of the academic positions indicated shall be marked with the sign "X"

Candidates to occupy the position:

1	Chief assistant professor	Dr	Dimitar	Tsvetkov	Peshev	University of Chemical Technology and Metallurgy
№	academic position	scientific degree	name	middle name	last name	workplace
2						
№	academic position	scientific degree	name	middle name	last name	workplace

Scientific area:

5	Technical sciences
code	name

Professional area:

5.10	Chemical technology
code	name

Scientific specialty:

Unit operations in Chemical and Biochemical Technologies
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The competition has been announced:

101	27.12.2019	Chemical engineering	Chemical and systems engineering
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

Professor	PhD, DSc	Jordan	Yankov	Hristov	University of Chemical Technology and metallurgy, Sofia
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Chief assistant professor	Dr	Dimitar	Tsvetkov	Peshev
academic position	scientific degree	name	middle name	last name


1.1. Meeting the minimum requirements under the Regulations:

A) The candidate meets the minimum requirements	20 points	x
B) The candidate doesn't meet the minimum requirements	0 points	
		one of the answers given is marked with the sign "X"

It must be filled in if answer B is marked. The publication activity of the candidate is analyzed. The response of the results achieved (quoted) is analyzed.

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1.2. Relevance of scientific and / or applied research:

A) The research is relevant. Part of the research is pioneering (no results are known on the topic by other authors)	8 points	
B) Research is relevant. Results from other authors are known for each of the topics and / or applications studied.	6 points	
C) Most of the research is relevant, but also some results are presented that have no scientific and / or applied value	4 points	
D) The smaller part of the research is relevant	2 points	
E) Research is not relevant	0 points	
		one of the answers given is marked with the sign "X"

The evaluation of the relevance of the research must be substantiated.

The scientific activity of Dr Peshev can be outlined:

- Rheology and hydrodynamics with relevant mass transfer in film flows on rotating surface ;
- Mass transfer in film flows of Newtonian and non-Newtonian fluids over rotating surfaces of disks.
- Modelling of chemical vapor deposition .
- Nano-filtration in aqueous media with organic solvents and inverse osmosis.
- Application of plasma-added chemical vapor deposition for surface modification of nano and ultra membranes.
- Encapsulation of natural bio-active extracts in a spouted bed. ;
- Biosorption of heavy metals with free suspended or immobilized microorganisms.
- Development of mathematical models of nano-filtration with organic solvents allowing experimental data validations. ;
- Processes of inverse osmosis for batch concentrations of solutions. .
- Development of models integrable OSN Designer for nano-filtration processes of separations.
- Systematic studies on encapsulation in spouted beds of thermally unstable extracts of bio-active extracts of rosemary obtained in aqueous mixtures of alcohols.

It should be emphasized on the fact that some of results of Dr. Peshev, especially the results on nana-filtrations is innovative with contributions to knowledge and with strong influence on the results of other authors in the same field of research.

1.3. Objectives of the research:

A) Realistic and of scientific and / or applied interest	8 points	x
B) Realistic, but not of scientific and / or applied interest	4 points	
C) Unattainable (unrealistic)	0 points	
		one of the answers given is marked with the sign "X"

Objectives must be specified. The type of the set objectives must be justified

The studies of Dr. Peshev are different directions relevant to mass transfer and new processes of separations= The problem formulations are clear, well defined and last but not least, successfully published in prestigious journals and highly cited at the same level.

1.4. Candidate research contributions:

A) With lasting scientific and / or applied response, they form the basis for new research and applications	20 points	x
B) They are of significant scientific and / or applied interest, complete and / or summarize previous research	16 points	
C) They are of scientific and / or applied interest	12 points	
D) Lack of significant contributions	8 points	
E) Lack of contributions	0 points	
		one of the answers given is marked with the sign "X"

Contributions must be specified. The type of results achieved must be justified.

The significance of the results achieved by the applicant is evident from the impressive

The effect of the results published of Dr. Peshev is clearly illustrated by the high level of the journal where they are published and the high level of citations in prestigious journals , referred by worldwide databases as SCOPUS and Clarivate

Most of the results are related to the following problems : :

- Correlations about the mass transfer in film flows of pseudo-plastic non-Newtonian fluid over a rotating disk – results from the PhD thesis
- Nano-Filtration (experimental studies) relevant to concentration and separation of components from bio-active natural extracts. .
- Modelling and simulations of nana-membrane separation processes scale-up and pilot level experiments.
- Modelling related to scaling-up based on limited number of data obtained at laboratory level. .
- Creation and development of a software package allowing integration with commercial simulation environment for simulation of separation processes. :
 - Batch concentration by nana-filtration organic solvents,
 - Inverse osmosis

1.5. Participation of the candidate in the achievement of the presented results:

A) The candidate has at least an equal participation in the submitted papers	8 points	x
B) The candidate has at least an equal participation in most of the submitted papers	7 points	
C) The candidate has a secondary participation in most of the submitted papers	4 points	
D) The candidate participation is unnoticeable	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the items C or D is marked.

1.6 Pedagogical activity:

A) The applicant has enough pedagogical activity at the university. The textbooks issued are modern and useful (they meet the requirements of the Regulations). The work with undergraduate and doctoral students is at a high professional level.	8 points	x
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B) The candidate has sufficient pedagogical activity at the university. The textbooks issued satisfy the requirements of the Regulations.	6 points	
C) The pedagogical activity and / or textbooks issued are insufficient (do not meet the requirements of the Regulations)	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the items B or C is marked.

1.7. Critical notes:

A) Lack of critical notes	8 points	x
B) Critical notes of a technical nature	7 points	
C) Critical notes that would partially improve the results achieved in a small part of the research	5 points	
D) Critical notes that would partially improve the results achieved in most of the research	3 points	
E) Significant critical notes	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the answers C, D or E is marked.

1.8. Conclusion

A) The evaluation of the candidate's activity is POSITIVE	This evaluation is assigned to a total number of at least 50 points	80
B) The evaluation of the candidate's	This evaluation is assigned to a	

activity is NEGATIVE	total number below 50 points	
		one of the answers given is marked with the sign "X"

To be filled in if requested by the member of the scientific jury
In accordance with the rules of UCTM and the law of academic promotions the materials presented by the candidate and the scientific results obtained allow to suggest senior assistant professor Dimiter Tsvetkov Peshev, PhD, to be promoted to the position of Associate Professor (5.Technical sciences, direction 5.10. Chemical technologies (Unit operations in Chemical and Biochemical technologies).

05.05.2020	The report was written by:	
date	Prof. Jordan Yankov Hristov, PhD, DSc	signature